INDEX TO VOLUME XLIV

AUTHORS

Page	Page
Badenhuizen, N. P. (see K. R. Chan-	2 corn stored two years at moisture
dorkar) 27 Bandemer, Selma L. (see R. J. Evans) 417 Basson, W. D. Determination of total sulfur in wheat with EDTA and EGTA after nitric-perchloric acid oxidation 92	contents of 14.5 and 15.2% and temperatures of 12°, 20°, and 25°C. 95 Circle, S. J. (see N. Catsimpoolas) 631 Cisneros, G. (see J. D. Summers) 318 Cluskey, J. E., and R. J. Dimler. Characterization of the acetic acidical contents of the content
Berk, Z. (see Sylvia Mizrahi) 193 Bhattacharya, K. R., and Y. M. Indudhara Swamy. Conditions of drying parboiled paddy for optimum milling quality 592	insoluble fraction of wheat gluten protein
Black, H. C. (see G. N. Irvine)	Conn, J. F. (see E. J. Malec)
tents of dry-milled corn fractions by gas-liquid chromatography 152 Bloch, F., and A. I. Morgan, Jr. Ger-	enthal)
mination inhibition in wheat and barley during steeping, and alpha- amylase development in the pres- cnce of gibberellic acid	Daghir, S. (see M. Maleki)
Boundy, Joyce A., J. E. Turner, J. S. Wall, and R. J. Dimler. Influence of commercial processing on com-	by ball-milling and roller-milling 324 Denault, L. J., and L. A. Underkoffer. A method for the detection and es-
position and properties of corn zein	timation of aflatoxin in fungal fer- mentation products
Dimler, and J. S. Wall. Protein composition of dent, waxy, and high-amylose corns	Deyoe, C. W. (see D. H. Waggle) 48 Dimler, R. J. (see Joyce A. Boundy)
Bourdet, A., and P. Feillet. Distribu- tion of phosphorus compounds in the protein fractions of various types of wheat flours	Doguchi, M., and I. Hlynka. Some rheological properties of crude glu-
Bradley, J. W. (see G. N. Irvine) 230 Brekke, O. L. Corn dry-milling: pre- tempering low-moisture corn 521	ten mixed in the farinograph 561 Eldridge, A. C., and W. J. Wolf. Purification of the 11S component of
Bushuk, W. (see Cecylia J. Marek) 300 Catsimpoolas, N., D. A. Rogers, S. J.	soybean protein 645 Erlander, S. R. (see R. W. Jones) 447 Evans, R. J., and Selma L. Bandemer.
Circle, and E. W. Meyer. Purifica- tion and structural studies of the 11S component of soybean proteins 631	Nutritive values of some oilseed proteins
Chandorkar, K. R., and N. P. Baden- huizen. The fate of ADPG-alpha- glucan glucosyltransferase during amylolytic corrosion of starch gran-	Farkas, G. L. (see G. R. Honold) 373 Farrell, E. P., A. Ward, G. D. Miller, and L. A. Lovett. Extensive analy- ses of flours and millfeeds made from nine different wheat mixes. I.
ules, and its relation to starch gran- ule structure	Amounts and analyses
fluoride effects in germinating corn seeds	Feillet, P. (see A. Bourdet)
of durum wheat by storage fungi 100	Fischer, M. H., and F. Smith. The co- dextrinization of amylopectin with

radioactive glucose and partially methylated glucose	. 551	Editor: Improvement of semolina quality through steam-treatment of durum wheat	230
Gilles, K. A. Editorialfacing	561	Effect of oxygen concentration on	
Goering, K. J. New starches. II. The properties of the starch chunks	8	deteriorative mechanisms of rice during storage	233
from Amaranthus retroflexus, and M. Schuh. New starches. III. The properties of	7	Johnson, J. A. (see L. W. Rooney) (see A. Salem) Jones, R. W., and S. R. Erlander. In-	
the starch from <i>Phalaris canariensis</i> . Graves, R. R., Ruth F. Rogers, A. J. Lyons, Jr., and C. W. Hesseltine.		Joslyn, M. A. (see J. Leichter)	447
Bacterial and actinomycete flora of Kansas-Nebraska and Pacific North-		Juliano, B. O. (see Amanda J. Vidal)	86
west wheat and wheat flour	238	Kissell, L. T. Optimization of white layer cake formulations by a multiple-factor experimental design Klock, M. (see P. W. Voisey) Kohler, G. O., and Rhoda Palter. Studies on methods for amino acid	253 359
of lipoxidase in wheat fractions and	607	analysis of wheat products	
Amino acid composition of heat- processed soymilk and its correla- tion with nutritive value, and R. J. Polimeni, Jr. Correlation of	70	Lai, T-S. (see C. C. Lee) Lambert, M. A. (see D. H. Waggle) Lee, C. C., and T-S. Lai. Studies with radioactive tracers. XI. The use of N-ethylmaleimide-1- ¹⁴ C in the determination of flour sulf-	620 48
amino acid indexes with nutritional quality of several soybean fractions	638	hydryls and correlations between masked sulfhydryls and loaf vol- umes	620
Hanford, J. The proteolytic enzymes of wheat and flour and their ef- fect on bread quality in the United		state of iron in flour, dough, and	346
Kingdom Hart, J. R. A method for detecting mixtures of artificially dried corn with high-moisture corn		bread	39
Hesseltine, C. W. (see R. R. Graves) Holme, J. (see J. C. Wootton)	288	Malec E. J., and J. F. Conn. A note on the determination of salt in self- rising Moure of S. Dankin F. Conn.	344
A. Stahmann. The oxidation-reduc- tion enzymes of wheat. II. A quan- titative investigation of the dehy-		Maleki, M., and S. Daghir. Effect of baking on retention of thiamine, riboflavin, and niacin in Arabic	400
Howard, N. B. (see J. C. Wootton) Huebner, F. R., J. A. Rothfus, and J.	373 333	Marek, Cecylia J., and W. Bushuk. Study of gas production and reten- tion in doughs with a modified Bra-	403
S. Wall. Isolation and chemical comparison of different gamma-glia- dins from hard red winter wheat flour	001	bender oven-rise recorder	300 333 675
Hui, P. A. (see H. Neukom)	238	Matsuo, R. R., and G. N. Irvine. Macaroni brownness	78
Inamine, E. S., Elaine G. Noble, and D. K. Mecham. Solubilization and fractionation of wheat flour proteins	140	Mauritzen, C. M. The incorporation of cysteine- ²⁶ S, cystine- ²⁶ S, and Nethylmaleimide- ²⁴ C into doughs	450
insoluble in dilute acetic acid	143 592	made from wheat flour McConnell, W. B., and A. J. Finlay- son. The incorporation of nitrogen- 15 into the constituents of the wheat	170
Irvine, G. N., J. W. Bradley, and H. C. Black. Communication to the		15 into the constituents of the wheat kernel	353

McOsker, D. E. (see J. C. Wootton)		Johnson. Studies of the carbonyl	
Mecham, D. K. (see E. S. Inamine)		compounds produced by sugar-	
Meredith, P. On the solubility of gli-	-	amino acid reactions. II. In bread	
adinlike proteins. IV. Characteri-		systems	576
zation of some gamma-gliadins	. 436	Salem, A. (see L. W. Rooney)	539
Meyer, E. W. (see N. Catsimpoolas)	631	Schuh, M. (see K. J. Goering)	532
Miller, G. D. (see E. P. Farrell)	. 39	Schuh, M. (see K. J. Goering) Seckinger, H. L., and M. J. Wolf.	
(see D. H. Waggle)	. 48	Lipid distribution in the protein	
Miller, H. (see P. W. Voisey)	. 359	matrix of wheat endosperm as ob-	
Mizrahi, Sylvia, G. Zimmermann, Z.		served by electron microscopy	669
Berk, and U. Cogan. The use of		Shelef, Leora, and N. N. Mohsenin.	
isolated soybean proteins in bread	. 193	Evaluation of the modulus of elas-	
Mohsenin, N. N. (see Leora Shelef)	392	ticity of wheat grain	392
Morgan, A. I., Jr. (see F. Bloch)		Slinger, S. J. (see J. D. Summers)	318
Muller, H. G. (see P. J. Frazier)	558	Sly, Dayle A. (see W. J. Wolf)	653
No. L A M I W. I Walt Cal.		Smith, F. (see M. H. Fischer)	
Nash, A. M., and W. J. Wolf. Solu-		Spyres, G. G. (see L. T. Black)	
bility and ultracentrifugal studies		Stahmann, M. A. (see P. L. Guss)	607
on soybean globulins		(see G. R. Honold)	373
Neukom, H., L. Providoli, H. Gremli,		Stillings, B. R. (see L. R. Hackler)	
and P. A. Hui. Recent investiga-			638
tions on wheat flour pentosans		Summers, J. D., S. J. Slinger, and G.	
Nimmo, C. C., and Mary T. O'Sulli-		Cisneros. Some factors affecting	
van. Immunochemical comparisons		the biological availability of phos-	010
of antigenic proteins of durum and		phorus in wheat by-products	318
Noble, Elaine G. (see E. S. Inamine)	142	Tanaka, K., K. Furukawa, and H.	
Nobie, Elaine G. (see E. S. mainine)	143	Matsumoto. The effect of acid and	
O'Sullivan, Mary T. (see C. C. Nim-		salt on the farinogram and exten-	
mo)	584	sigram of dough	675
		Tani, T. (see T. Iwasaki)204,	233
Palter, Rhoda (see G. O. Kohler)		Thomson, T. R., and D. Petite. Het-	433
Parks, S. D. (see T. R. Thomson)	118	erogeneous reaction of granular	
Petite, D. (see T. R. Thomson)	105	starch with hydrogen chloride. I.	
Polimeni, R. J., Jr. (see L. R. Hack-		Microscopic observations	105
ler)	638	, and S. D. Parks. Het-	100
Ponte, J. G., Jr., V. A. De Stefanis, and R. H. Cotton. Studies of gluten		erogeneous reaction of granular	
and R. H. Cotton. Studies of gluten		starch with hydrogen chloride. II.	
lipids. I. Distribution of lipids in		Quantitative studies	118
gluten fractions separated by solu-	107	Titcomb. S. T. (see I. G. Ponte, Ir.)	
bility in 70% ethanol	427	Titcomb, S. T. (see J. G. Ponte, Jr.) Tolmasquim, E. (see F. R. T. Rosen-	
, S. T.		thal)	554
Titcomb, and R. H. Cotton. Study		Tousignant, E. A. (see P. R. Witt,	
of gluten properties as influenced	011	Jr.)	403
by certain organic solvents		Tsen, C. C. Changes in flour pro-	
Providoli, L. (see H. Neukom)	230	teins during dough mixing	308
Pichardson T (cas P I Cuss)	607	Turner, J. E. (see Joyce A. Boundy)	281
Richardson, T. (see P. L. Guss) Rogers, D. A. (see N. Catsimpoolas)	631	TI I. I. G., T. A. (T. T. D.,	1
Rogers, Ruth F. (see R. R. Graves)	288	Underkoffer, L. A. (see L. J. Denault)	1
Rooney, L. W., A. Salem, and J. A.	200	Vidal, Amanda J., and B. O. Juliano.	
Johnson. Studies of the carbonyl		Comparative composition of waxy	
compounds produced by sugar-		and nonwaxy rice	86
amino acid reactions. I. Model sys-		Voisey, P. W., H. Miller, and M.	
tems	539	Klock. An electronic recording	
(see A. Salem)		dough mixer. V. Measurement of	
Rosenthal, F. R. T., A. M. N. Corrêa,	0.0	energy used in a mixograph-type	
and E. Tolmasquim. Note on the	,	mixer	359
reaction of corn starch with chloro-			
methylphosphonic dichloride in pyr-		Waggle, D. H., M. A. Lambert, G. D.	
idine	554	Miller, E. P. Farrell, and C. W.	
Rothfus, J. A. (see F. R. Huebner)	221	Deyoe. Extensive analyses of flours	
		and millfeeds made from nine dif-	
Sair, L. Heat-moisture treatment of	-	ferent wheat mixes. II. Amino	
starch	8	acids, minerals, vitamins, and gross	40
Salem, A., L. W. Rooney, and J. A.		energy	48

Wall, J. S. (see Joyce A. Boundy) 160, 281 (see F. R. Huebner) 221	Wolf, M. J., (see H. L. Seckinger) 669 Wolf, W. J., and Dayle Ann Sly. Cryoprecipitation of soybean 11S
Ward, A. (see E. P. Farrell) 39	protein
Watson, S. A., and K. R. Yahl. Com-	(see A. C. Eldridge) 645
parison of the wet-milling prop-	(see A. M. Nash) 183
erties of opaque-2 high-lysine corn and normal corn	Wootton, J. C., N. B. Howard, J. B. Martin, D. E. McOsker, and J.
Williams, P. C. Relation of starch damage and related characteristics	Holme. The role of emulsifiers in the incorporation of air into layer
to kernel hardness in Australian	cake batter systems 333
wheat varieties	Woychik, J. H. (see Joyce A. Boun-
Wiseblatt, L. Reduction of the micro- bial populations in flours incor-	dy)
porated in refrigerated foods 269	Yahl, K. R. (see S. A. Watson) 448
Witt, F. R., Jr., and E. A. Tousignant.	, (,
Proteolytic activity based on a malt	Zimmermann, G. (see Sylvia Mizra-
flour substrate interaction	hi)

SUBJECTS

	Page	I I	Page
Absorption of HCl by granular starch (Thomson and Parks)		Miller, Farrell, and Deyoe) In gliadins, gamma-, from HRW wheat flour (Huebner, Rothfus,	48
Acetic; fraction of wheat gluten in- soluble with (Cluskey and Dim-		and Wall)	221
ler)		(McConnell and Finlayson) In high-lysine and normal corn	353
Effect, with salt, on dough rheology (Tanaka, Furukawa, and		(Watson and Yahl)	488
Matsumoto)		In proteins of corn (dent, waxy, and high-amylose) (Boundy,	160
Fatty, see Fatty acids Gibberellic, with steeping treatment		Woychik, Dimler, and Wall) Of protein fractions, acetic acid-	100
of barley and wheat; amylase development (Bloch and Mor-		insoluble and glutenin (Cluskey and Dimler)	611
gan) Nitric-perchloric, for oxidation		In rice, brown; waxy and nonwaxy (Vidal and Juliano)	86
treatment of wheat to detn. total sulfur (Basson)	92	In soy milk, heat-processed; corre- lation with nutritive value (Hack-	***
Thioacetic; effect on birefringence of stretched gluten (Frazier and		ler and Stillings) In soybean fractions; indexes corre-	70
Muller)	558	lated with nutritive value (Hack- ler, Stillings, and Polimeni)	638
Rogers, Lyons, and Hesseltine) Aflatoxin: method for detection and	288	In soybean proteins; 11S component vs. whole globulins (Catsimpool-	
estimation of, in fungal fermen- tation products (Denault and		as, Rogers, Circle, and Meyer) In wheat and millfeeds; methods for	
Underkofler)	1	analysis (Kohler and Palter) Amino groups in water-solubles of flour; measurement (D'Appolonia	512
exchange (Mauritzen)	170	and Gilles) Amylase, alpha-	324
(Boundy, Turner, Wall, and Dimler)	281	Activity, vs. malt processing variables (Witt and Tousignant)	403
Alpha-amylase, see Amylase, alpha- Amaranthus retroflexus (pigweed); properties of starch chunks from		Development in steeping of barley and wheat with gibberellic acid (Bloch and Morgan)	61
(Goering)	245	Amylopectin, see Starch, Corn, amylopectin fraction	01
In flours and millfeeds from nine wheat mixes (Waggle, Lambert,		Apparatus Instron machine for detg. mechani-	

cal properties of individual wheat	200	In bread systems (Salem, Rooney,	F76
grain (Shelef and Mohsenin) Mixer, electronic recording (Voi-	392	and Johnson) Bulk density of flours and millfeeds	576
sey, Miller, and Kloek)	359	from nine wheat mixes (Farrell,	
Oven rise recorder (Marek and		Ward, Miller, and Lovett)	39
Bushuk)	300		
Tank for steeping under turbulent	61	Cake and cakemaking	
agitation (Bloch and Morgan)	61	Emulsifiers in; role in incorpora-	
Arabinoxylans from flour; recent investigations (Neukom, Providoli,		tion of air (Wootton, Howard, Martin, McOsker, and Holme)	222
Gremli, and Hui)	238	Optimization of formulations by	333
Ash, in flours and millfeeds from nine	200	multiple-factor experimental de-	
wheat mixes (Farrell, Ward, Mil-		sign (Kissell)	253
ler, and Lovett)	39	Canary grass seed; properties of starch	
Aspergillus		from (Goering and Schuh)	532
In corn stored 2 years (Christ-	0.5	Carbohydrates; see main entries for:	
Engine preparations from for all	95	Arabinoxylans; Hemicelluloses; Pen-	
Enzyme preparations from, for affa- toxin study (Denault and Under-		tosans; Polysaccharides Carbonyl compounds from sugar-	
kofler)	1	amino acid reaction	
In wheat, stored (Christensen)	100	I. Model systems (Rooney, Salem,	
, , , , , , , , , , , , , , , , , , , ,		and Johnson)	539
Bacterial flora of flour and wheat		II. Bread systems (Salem, Rooney,	
(Graves, Rogers, Lyons, and	200	and Johnson)	539
	288	Chloromethylphosphonic dichloride;	
Baking properties, see Bread and breadmaking		reaction of, with corn starch in pyridine (Rosenthal, Corrêa, and	
Baking tests; bread, see Bread and		Tolmasquim)	554
breadmaking; cake, see Cake and		Chromatography	331
cakemaking		For carbonyl compounds from	
Barley		sugar-amino acid reactions	
Amylase development and germina-		(Rooney, Salem, and Johnson)	
tion inhibition in, during steep-		(Salem, Rooney, and Johnson)	3/6
ing with gibberellic acid (Bloch	61	Characterization of gamma-gliadins (Meredith)	436
and Morgan)	OI	For gamma-gliadins from HRW	130
Biological value, see Nuritive value		wheat flour (Huebner, Rothfus,	
		and Wall)	221
Birefringence of stretched gluten; af- fected by potassium iodate and		Gas-liquid (GLC); for detn. of oil	
thioacetic acid (Frazier and Mul-		in dry-milled corn fractions	150
ler)	558	(Black, Spyres, and Brekke)	152
Bread and breadmaking		Of hemicelluloses from flour (Cole) Separation of gluten fractions; iso-	TII
Carbonyl compounds produced by		topes incorporated (Mauritzen)	170
sugar-amino acid reactions (Sa-		Solubilization and fractionation of	
lem, Rooney, and Johnson)	576	flour proteins (Inamine, Noble,	
Effect of baking on vitamin reten- tion (Maleki and Daghir)	402	and Mecham)	143
Effect of organic solvents on gluten	403	Of soybean proteins on hydroxyl-	CEO
properties (Ponte, De Stefanis,			653
Titcomb, and Cotton)	211	Thin-layer (TLC); for lipid distri- bution in gluten fractions (Ponte,	
Effect of proteolytic enzymes on			427
bread quality in the U.K. (Han-		De Stefanis, and Cotton) Compression tests of wheat kernel	
ford)	499	(Shelef and Mohsenin)	392
Iron in; state of, and changes dur-		Color of macaroni; brownness (Mat-	70
ing baking (Leichter and Jos- lyn)	346	suo and Irvine)	78
Soybean protein (isolated) in (Miz-	010	Corn (see also succeeding Corn en- tries)	
rahi, Zimmermann, Berk, and		Dry-milling of (low-moisture); pre-	
Cogan)	193	tempering (Brekke)	521
Browning reaction: carbonyl com-		Fractions of, dry-milled; oil content	
pounds formed by sugar-amino		detn. by GLC (Black, Spyres,	
acid reactions		and Brekke)	152
In model systems (Rooney, Salem,	520	Germinating; study of fluoride and	100
and Johnson)	139	phytase effects in (Chang)	129

Heat-damaged; increased effects of	farinograph (Doguchi and	
hysteresis in (Hart) 601	Hlynka)	561
High-lysine; wet-milling properties vs. normal corn (Watson and	Drying of rice (parboiled paddy); conditions for optimum milling	
Yahl)	quality (Bhattacharya and In-	
Mixtures of dried and high-mois-	dudhara Swamy)	592
ture; detection of (Hart) 601	dudhara Swamy) Electron microscope, for lipid distri-	001
Protein composition of dent, waxy,	bution in protein of wheat endo-	
	sperm (Seckinger and Wolf)	669
and high-amylose (Boundy, Woy- chik, Dimler, and Wall)	Electrophoresis	
Stored, see under Storage studies	Acetic acid-insoluble fraction of	
Corn starch, see Starch, Corn	wheat gluten protein (Cluskey	
Corn wet-milling; properties of high-	and Dimler)	611
lysine corn vs. normal corn (Wat-	Characterization of gamma-gliadins	
son and Yahl) 488	(Meredith)	436
Cottonseed; nutritive value of proteins:	Disc; of soybean proteins (Catsim-	
of (Evans and Bandemer) 417	poolas, Rogers, Circle, and Mey-	CO.
Cross-linking of granular starch	er)	631
(Thomson and Petite) 118	For immunochemical comparisons	
Cryoprecipitation of soybean 11S pro-	of wheat proteins (Nimmo and	584
tein (Wolf and Sly) 653	O'Sullivan)	304
Domaged starch see under Starch	flour proteins (Inamine, Noble,	
Damaged starch, see under Starch Dehydrogenases of wheat; quantitative	and Mecham)	143
study (Honold, Farkas, and Stah-	Starch-gel, for corn protein (Boun-	
mann)	dy, Woychik, Dimler, and Wall)	160
Dextrans; interaction with wheat pro-	Emulsifiers; polymorphic properties of,	
teins (Jones and Erlander) 447	and role of incorporation of air,	
Dextrins and codextrins; dextriniza-	in cake batter systems (Wootton,	
tion and codextrinization of amy-	Howard, Martin, McOsker, and	
lopectin with radioactive glucose	Holme)	333
(Fisher and Smith) 551	Enrichment, see Nutritive value	
Diastatic power vs. malt processing	Enzymes, general	
variables (Witt and Tousignant) 403	Preparations of, from Aspergillus;	
Disulfide cleavage in zein (Boundy,	for aflatoxin study (Denault and	
Turner, Wall, and Dimler) 281	Underkofler)	1
Dough (see also Extensigraph, Fari-	Proteolytic, of wheat and flour; ef-	
nograph, Mixograph studies)	fect on bread quality in U.K.	499
Iron in; state of (Leichter and	(Hanford) Enzymes, specific; see main entries for:	133
Joslyn) 346 Mixing	Amylase, alpha-; Dehydrogenase;	
changes in protein components	Glucosyltransferase; Lipoxidase;	
during (Tsen) 308	Phytase	
effect on gas production and re-	Errata	
tention as measured by oven		229
rise recorder (Marek and Bush-	Vol. 44, p. 48, Waggle et al Vol. 44, p. 86, Vidal and Juliano	416
uk)	Vol. 44, p. 554, Rosenthal et al	680
farinograph curves for gluten	Experimental design for cake formula	
(Doguchi and Hlynka) 301	optimization (Kissell)	253
recording mixer, electronic; for	Extensigraph studies; effect of acid	
measurement of energy (Voi-	and salt (Tanaka, Furukawa, and	
sey, Miller, and Kloek) 359	Matsumoto)	675
oven rise recorder used for effects	Farinograph studies	
of ingredients in fermentation	Effect of acid and salt (Tanaka,	675
(Marek and Bushuk)	Furukawa, and Matsumoto)	675
Proteins of; isotopes incorporated, for study of -SH/S-S interchange	Gluten; mixing curves (Doguchi	561
(Mauritzen) 170	and Hlynka)	301
Rheology of	In flours and millfeeds (Farrell,	
effect of acid and salt (Tanaka,	Ward, Miller, and Lovett)	39
Furukawa, and Matsumoto) 675	In rice (brown), waxy and non-	-
measurement of energy used in	waxy; content and quality (Vidal	
mixograph-type mixer (Voisey,	and Juliano)	86
Miller, and Kloek) 359	Fatty acids in rice (brown) (Vidal	
properties of gluten mixed in	and Iuliano)	86

Feeds, see Millfeeds		HRW wheat) (Bourdet and	
Fermentation products, fungal; method		Feillet)	457
for detection and estimation of		Proteolytic enzymes of; effect on bread quality in U.K. (Hanford)	
aflatoxin in (Denault and Under-		bread quality in U.K. (Hanford)	499
kofler)	1	Self-rising; detn. of salt in (Malec	
Fiber, crude, in flours and millfeeds (Farrell, Ward, Miller, and Lov-		and Conn)	344
(Farrell, Ward, Miller, and Lov-	00		
ett)	39	chemical detn. and correlation	
Flavor of bread; carbonyl compounds		with loaf volume (Lee and Lai)	620
formed by sugar-amino acid reac-		Flour fractions (see also specific frac-	
tions. I. Model systems		tions); isolation and chromato-	
(Rooney, Salem, and Johnson)	539	graphic fractionation of hemicel-	
II. Bread systems		luloses (Cole)	411
(Salem, Rooney, and Johnson)	576	Flour improvers; iodate, potassium, and thioacetic acid; effect on	
Flour (wheat, unless specified; see also		and thioacetic acid; effect on	
succeeding Flour entries)		birefringence of stretched gluten	
Analyses of, from nine wheat mixes		(Frazier and Muller)	558
(HRS, HRW, SRW, Western		Fluoride; effects of, in germinating	
white wheat) (Farrell, Ward,		corn seeds (Chang)	129
Miller, and Lovett) (Waggle, Lambert, Miller, Far- rell, and Deyoe)	39	Fractionation	
(Waggle, Lambert, Miller, Far-		Of flour, see Flour fractions	
rell, and Deyoe)	48	Of flour proteins insoluble in di-	
Bacterial and actinomycete flora of		lute acetic acid (Inamine, Noble,	
(Graves, Rogers, Lyons, and Hes-		and Mecham)	143
	288	and Mecham)	
Damaged by ball- and roller-mill-		acterization (Meredith)	436
ing; protein alteration in (HRS		Fungi, see Molds; specific fungi	
wheat) (D'Appolonia and Gilles)	324		
Effect of heat on microbial count		Gas production and retention; studied	
in (Wiseblatt)	269	with oven rise recorder (Marek	
Electron microscope study of endo-		and Bushuk)	300
sperm protein (HRS wheat)		Gibberellic acid, see Acid, Gibberellic	300
(Seckinger and Wolf)	669	Gliadin(s), gamma-	
Gliadins from (gamma-); isolation		Characterization (Meredith)	436
and chemical composition (HRW		From HRW wheat flour; isolation	130
wheat) (Huebner, Rothfus, and		and chemical comparison (Hueb-	
Wall)	221	ner, Rothfus, and Wall)	221
Gluten from; acetic acid-insoluble		Globulin(s)	441
fraction of protein (HRW wheat)		In corn (dent, waxy, high-amylose)	
(Cluskey and Dimler)	611	(Boundy, Woychik, Dimler, and	
Hemicelluloses from; isolation and			160
chromatographic fractionation		Wall) In dough; isotopes incorporated for	100
(HRW Montana wheat) (Cole)	411	study of -SH/S-S exchange	
Iron in; state of (Leichter and		(Mauritzen)	170
Joslyn)	346	Of soybeans; solubility and ultra-	170
Kernel hardness vs. starch damage,		centrifugal studies (Nash and	
diastatic activity, gassing power,		Wolf)	183
and water absorption (Australian		Wolf)	103
wheat) (Williams)	383	of amulanestin with (Fischer	
Lipids of; distribution in gluten		of amylopectin with (Fischer	551
fractions (Ponte, De Stefanis,		and Smith)	551
and Cotton)	427	Glucosyltransferase; activity of, and	
Microbial counts in; reduction		fate of during amylolytic corro-	
(Wiseblatt)	269	sion of starch granules (Chan-	
(Wiseblatt) Pentosans of; recent investigations		dorkar and Badenhuizen)	27
(Neukom, Providoli, Gremli, and		Glutelin, in corn (dent, waxy, high-	
	238	amylose) (Boundy, Woychik,	
Proteins of; solubilization and frac-		Dimler, and Wall)	160
tionation (HRS wheat) (Ina-		Gluten	
mine, Noble, and Mecham)	143	Birefringence of, affected by po-	
Protein fractions of	- 10	tassium iodide and thioacetic acid	
distribution of and changes in		(Frazier and Muller)	558
(HRS. SWW wheat) (Tsen)	308	Fractions, see individual fractions	_00
distribution of phosphorus com-		Isotopes incorporated, for study of	
distribution of phosphorus com- pounds in (SWW, SRW, HRS,		-SH/S-S exchange (Mauritzen)	170
pounds in (ori ii, batti, like),		Jan D D Committee (Arabitateett)	0

Lipids in; distribution in fractions	Isotopes, see Radioactivity studies
(Ponte, De Stefanis, and Cotton) 427	Vination of acceptions of acceptant
Nitrogen-15 incorporated into (Mc-	Kinetics of reactions of granular
Connell and Finlayson)	starch (Thomson and Petite) 118
(Doguchi and Hlynka) 561	Lipids
Properties of, vs. organic solvents	Of gluten; distribution in fractions
(Ponte, De Stefanis, Titcomb,	(Ponte, De Stefanis, and Cotton) 42
and Cotton) 211	In protein of wheat endosperm;
Protein of; acetic acid-insoluble	electron microscope study (Seck-
fraction (Cluskey and Dimler) 611	inger and Wolf) 669
Softening of, in breadmaking; vs.	Surface-active, in cake batters; en-
proteolytic activity (Hanford) 499	hancing air incorporation (Woot-
Of wheat; interaction with dextrans	ton, Howard, Martin, McOsker, and Holme)
(Jones and Erlander) 447	
Gross energy in flours and millfeeds (Waggle, Lambert, Miller, Far-	Lipoxidase; isoenzymes of, in wheat millfeeds and soybean (Guss,
rell, and Deyoe)	Richardson, and Stahmann) 60%
ren, and Deyoe,	Loaf volume; correlations with sulf-
Hardness of wheat	hydryls (Lee and Lai) 620
Modulus of elasticity of individual	,, (,
grain; behavior under compres-	Macaroni, brownness of (Matsuo and
sion (Shelef and Mohsenin) 392	Irvine) 78
(Australian) vs. starch damage and	Maillard reaction, see Browning reac-
related characteristics (Williams) 383	tion
Heat-processing of soy milk; amino	Maize, see Corn
acids and nutritive value (Hack- ler and Stillings)	Maleimides; NEMI-14C For detn. of flour sulfhydryls (Lee
Heat-treatment	and Lai)
Of flour, for reduction of microbial	Incorporated into doughs (Mauritz-
counts (Wiseblatt) 269	en) 170
Of starch; sorption study (Sair) 8	Malt; enzyme kinetics, and proteolytic
Heating time and temperature; effect	activity of (Witt and Tousignant) 403
on composition and quality of	Malting of barley and wheat without
brown rice (Iwasaki and Tani) 204	germination (Bloch and Morgan) 61
Hemicelluloses from flour; isolation	Mechanical properties of wheat; mod-
and chromatographic fractiona- tion (Cole)	ulus of elasticity (Shelef and Mohsenin)
Hydrogen chloride; action on granular	Methods
starch (Thomson and Petite) 105	Detecting mixtures of dried and
quantitative studies (Thomson	high-moisture corn (Hart) 601
and Parks) 118	Detection and estimation of aflatox-
Hydrolysis; correction factors for, in	in in fungal fermentation prod-
amino acid analysis of wheat	ucts (Denault and Underkofler) 1
products (Kohler and Palter) 512	Detn. of nonprotein nitrogen in
Hysteresis; effects of, in mixtures of dried and high-moisture corn	water-solubles of flour (D'Ap- polonia and Gilles)
(Hart)	Detn. of oil content of dry-milled
(11411)	corn fractions by GLC (Black,
Immunochemistry, for proteins of dur-	Spyres, and Brekke) 152
um and HRS wheat; comparisons	Detn. of salt in self-rising flour
(Nimmo and O'Sullivan) 584	(Malec and Conn) 344
Infrared spectroscopy of granular starch (Thomson and Parks) 118	Detn. of sulfur in wheat (Basson) 92
starch (Thomson and Parks) 118	Microbiology of flour and wheat
Iodate, potassium; see under Flour	(Graves, Rogers, Lyons, and Hesseltine)
improvers Iron; state of, in flour, dough, and	seltine)
bread (Leichter and Joslyn) 346	Microbiology)
Isoenzymes	Actinomycete and bacterial flora of
Dehydrogenases of wheat; quantita-	flour and wheat (Graves, Rogers,
tive study (Honold, Farkas, and	Lyons, and Hesseltine) 288
Stahmann) 373	In flours; reduction of count (Wise-
Of lipoxidase, in wheat millfeeds	blatt) 269
and soybean (Guss, Richardson,	Microscopic structure, see Structure,
and Stahmann) 607	microscopic; Microscopic studies

Microscopic studies		Nutritive value of:	
Of cake batters (Wootton, Howard,		Bread (Arabic); retention of vita-	
Martin, McOsker, and Holme)		mins in baking (Maleki and	
Of starch chunks from pigweed		Daghir)	
(Amaranthus retroflexus) (Goer-		Millfeeds; phosphorus utilization	
ing) Mill or milling products, mill frac-	243	(Summers, Slinger, and Cisne-	318
tions, see Millfeeds		ros) Oilseed proteins (Evans and Ban-	310
Millfeeds		demer)	417
Amino acid analysis of; study of		Rice (brown); vs. heating time and	
methods (Kohler and Palter)		temperature (Iwasaki and Tani)	204
Analyses of, from nine wheat mixes		Soybean fractions, vs. amino acid	
(Farrell, Ward, Miller, and		indexes (Hackler, Stillings, and	
Lovett)		Polimeni)	638
(Waggle, Lambert, Miller, Far-		Soybean protein (isolated), in bread (Mizrahi, Zimmermann, Berk, and Cogan)	
rell, and Deyoe)	48	bread (Mizrahi, Zimmermann,	
Phosphorus in; utilization study		Berk, and Cogan)	193
(Summers, Slinger, and Cisneros)	318	Soy milk, heat-processed (Hackler	
Milling, experimental		and Stillings)	70
Effect on flour proteins with over-			
grinding (D'Appolonia and		Oil in corn fractions, dry-milled; detn.	
Gilles) Pretempering low-moisture corn	324	by GLC (Black, Spyres, and	
(Brekke)		Brekke)	152
Wet-milling properties of high-		Oilseeds, proteins of; nutritive value	
lysine and normal corn compared		(Evans and Bandemer)	41/
(Watson and Yahl)		Oven rise recorder (modification of),	
Milling quality of rice (parboiled		for gas production and retention	200
paddy); effect of drying condi-		in dough (Marek and Bushuk) Oxidation and reduction of zein	300
tions (Bhattacharya and Indu-		(Boundy, Turner, Wall, and	
dhara Swamy)	592	Dimler)	281
Minerals in flours and millfeeds from		Oxidation-reduction enzymes of wheat	
nine wheat mixes (Waggle, Lam-	40	Dehydrogenases; quantitative inves-	
bert, Miller, Farrell, and Deyoe)	48	tigation (Honold, Farkas, and	
Modulus of elasticity of wheat (Shelef	392	Stahmann)	373
and Mohsenin)	394	Isoenzymes of lipoxidase (Guss,	
Affecting corn stored 2 years at		Richardson, and Stahmann)	607
14.5 and 15.2% (Christensen)	95	Oxygen; effect of concentration on	
In flours and millfeeds from nine		deteriorative mechanisms of	022
wheat mixes (Farrell, Ward,		stored rice (Iwasaki and Tani)	233
Miller, and Lovett)	39		
Pretempering low-moisture corn		Paddy, see under Rice	
(Brekke)	521	Particle Size Index (PSI), for kernel	
For starch treatment, with heat;	0	hardness of wheat, vs. starch	000
sorption study (Sair)	8	Peanuts; proteins of; nutritive value	383
Molds (fungi) on corn stored 2 years (Christensen)	95	(Evans and Bandemer)	417
Motion picture studies of hydration of	33	Pentosans of flour; recent investiga-	111
granular starch (Thomson and		tions (Neukom, Providoli, Grem-	
Petite)	105		238
		Phalaris canariensis; unusual proper-	
Niacin; retention of, in baking of		ties of starch from (Goering and	
Arabic bread (Maleki and Da-		Schuh)	532
ghir)	483	Phosphorus	
Nitrogen, nonprotein; detn. in water-		Biological availability of, in mill-	
solubles of flour (D'Appolonia		feeds (Summers, Slinger, and	010
and Gilles)	324	Cisneros)	318
Nitrogen-15; incorporation into wheat		Compounds of; distribution in	
protein (McConnell and Finlay-		flours, glutens, and protein frac- tions (Bourdet and Feillet)	457
son)	353	Phytase; effects in germinating corn	137
Nucleic compounds in flour, glutens,		seeds (Chang)	129
and protein fractions (Bourdet		Pigweed; properties of starch chunks	
and Feillet)	457	from (Goering)	245

Polysaccharides; interaction between wheat proteins and dextrans (Jones and Erlander)	interaction with dextrans (Jones and Erlander)	447
Propylene oxide in flour; detn. and use to reduce microbial counts (Wiseblatt)	also under Nutritive value), of soy milk, heat-processed; amino acids (Hackler and Stillings) Proteolytic activity of malts, based on	70
Protein(s) (see also individual pro- teins) Acetic acid-insoluble fraction of	malt flour substrate interaction; affected by malt processing vari- ables (Witt and Tousignant)	
gluten (Cluskey and Dimler) 611 Alteration in damaged flours (D'Appolonia and Gilles) 324	Radioactivity studies Cysteine-25 S, cystine-25 S, and	
In corn (dent, waxy, high-amylose) (Boundy, Woychik, Dimler, and Wall)	NEMI-14C; incorporation into doughs (Mauritzen)	170
Crude, in brown rice, waxy and nonwaxy; content and quality (Vidal and Juliano)	Glucose; codextrinization of amylo- pectin (Fischer and Smith) NEMI- ¹⁴ C; tracer for detn. of flour	551
In flour changes in components during	sulfhydryls (Lee and Lai) Nitrogen-15; incorporation into	620
mixing (Tsen)	wheat protein (McConnell and Finlayson)	353
solubilization and fractionation (Inamine, Noble, and Me-	formula optimization (Kissell) Riboflavin; retention of, in baking of	253
In flours and millfeeds from nine wheat mixes (Farrell, Ward, Mil-	Arabic bread (Maleki and Da- ghir) Rice, brown	483
ler, and Lovett) 39 Gliadinlike; characterization of	Comparative composition of waxy and nonwaxy (Vidal and Juli-	86
gamma-gliadin (Meredith) 436 Globulins of flour; nucleic com- pounds in (Bourdet and Feil-	Effect of heating time and tempera- ture on composition and quality	00
let)	(Iwasaki and Tani) Parboiled paddy; drying conditions for optimum milling quality	204
phosphorus in (Bourdet and Feillet)	(Bhattacharya and Indudhara Swamy)	592
vestigations (Neukom, Providoli, Gremli, and Hui)	Stored; oxygen concentration vs. deteriorative mechanisms (Iwa- saki and Tani)	233
Bandemer)	Safflower seed; protein of, nutritive	
7S component; purification (Wolf and Sly)	value (Evans and Bandemer) Salt Effect (with acid) on dough rhe-	417
(Wolf and Sly)	ology (Tanaka, Furukawa, and Matsumoto) In self-rising flour; detn. (Malec	675
11S component; purification and structural studies (Catsimpool-	and Conn)	344
as, Rogers, Circle, and Meyer) 631 isolated; use in bread (Mizrahi, Zimmermann, Berk, and Co-	Macaroni brownness study (Matsuo and Irvine)	78
gan)	ment (Irvine, Bradley, and Black)	230
Water-soluble, from durum wheat, causing brownness in macaroni	Sesame seed; nutritive value of pro- tein (Evans and Bandemer) Shortenings; additives for, in layer	417
(Matsuo and Irvine)	cakes (Wootton, Howard, Mar- tin, McOsker, and Holme) Sieve analysis of flours and millfeeds	333
(durum, HRS) (Nimmo and O'Sullivan)584	from nine wheat mixes (Farrell, Ward, Miller, and Lovett)	39

Salubility studies		In flower and millfoods from nine	
Solubility studies		In flours and millfeeds from nine	
Of gliadinlike proteins; characteri-		wheat mixes (Farrell, Ward, Mil-	39
zation of gamma-gliadins (Mere-		ler, and Lovett)	39
of soybean globulins (Nash and		Granular (corn, potato, rice, wheat): heterogeneous reaction	
Wolf)	183	with gaseous HCl	
Of soybean proteins (Eldridge and	103	(Thomson and Petite)	105
Wolf)		(Thomson and Parks)	118
Solubilization of flour proteins insolu-		Granules of; amylolytic corrosion,	110
ble in dilute acetic acid (Ina-		and fate of glucosyltransferase;	
mine, Noble, and Mecham)		microscopic structure (Chandor-	
Solvents, organic; influencing gluten		kar and Badenhuizen)	27
properties (Ponte, De Stefanis,		Granules of, from canary grass	
Titcomb, and Cotton)	211	seed; structure and microscopic	
Soy milk, heat-processed; amino acid		appearance (Goering and Schuh)	532
composition and correlation with		Potato; moist heat-treatment of, in	332
nutritive value (Hackler and		sorption study; microscopic ap-	
Stilling)	70	pearance of granules (Sair)	8
Soybean(s)		Rice Standard (Sant)	•
Globulins of; solubility and ultra-		content and quality (brown;	
centrifugal studies (Nash and		waxy and nonwaxy) (Vidal	
Wolf)	183	and Juliano)	86
Isoenzymes of lipoxidase in (Guss,	100	decomposition during storage	-
Richardson, and Stahmann)	607	(Iwasaki and Tani)	233
Protein of	007	Statistical study for cake formula	200
isolated, in bread (Mizrahi, Zim-		optimization (Kissell)	253
mermann, Berk, and Cogan)	193	Steam-pelleting of millfeeds for	400
nutritive value (Evans and Ban-	100	chicks; phosphorus utilization	
demer)	417	study (Summers, Slinger, and	
7S component; purification (Wolf		Cisneros)	318
and Sly)		Steam-treatment of durum wheat, to	
11S component; purification		improve semolina quality (Irvine,	
(Eldridge and Wolf)	645	Bradley, and Black)	230
11S component; cryoprecipitation		Steeping of barley and wheat; amylase	
(Wolf and Sly)		development and germination-in-	
Protein quality of fractions (Hack-		hibiting effect of turbulent agita-	
ler, Stillings, and Polimeni)	638	tion (Bloch and Morgan)	61
Starch(es)		Storage studies	
Barley, corn, smooth and wrinkled		With corn; changes, at 14.5 and	
pea, tobacco; amylolytic corro-		15.2% moisture, 12°, 20°, and	
sion of granules and fate of glu-		25°C., for 2 years (Christen-	
cosyltransferase (Chandorkar and		sen)	95
Badenhuizen)	27	With rice; oxygen concentration vs.	
From canary grass seed (Phalaris		deteriorative mechanisms (Iwasaki	
canariensis); unusual properties		and Tani)	233
(Goering and Schuh)	532	With wheat (durum); invasion by	
Chunks, from pigweed (Amaranthus		Aspergillus (Christensen)	100
retroflexus); properties (Goer-		Stress in dough, see Dough, Rheology	
ing)	245	of	
Corn		Structure, microscopic (see also Mi-	
amylopectin fraction; codextrin-		croscopic studies)	
ization with radioactive glu-		Of granular starches	
cose (Fischer and Smith)	551	(Thomson and Petite)	105
heterogeneous reaction of, with		Of starch granules (Chandorkar	
gaseous HCl		and Badenhuizen)	27
(Thomson and Petite)		Sulfhydryls, masked, of flour; corre-	
(Thomson and Parks)	118	lation with loaf volume (Lee and	
moist heat-treatment of; sorption	_	Lai)	620
study (Sair)	8	Sulfhydryl-disulfide exchange vs. in-	
reaction with chloromethylphos-		corporation of isotopes into glu-	
phonic dichloride in pyridine		ten and soluble proteins of dough	480
(Rosenthal, Correa, and Tol-		(Mauritzen)	170
masquim)	334	Sulfur	
Damage, vs. kernel hardness (Wil-	200	In wheat; rapid method for detn.	00
liams)	383	(Basson)	92

In zeins, content (Boundy, Turner, Wall, and Dimler)	(HRS, HRW, White club) (Bloch and Morgan)
grain (Boundy, Turner, Wall,	damage and related characteris-
and Dimler)	tics (Williams) 383
Sunflower seed; nutritive value of pro-	Lipid distribution in endosperm
tein in (Evans and Bandemer) 417	(HRS); electron microscope
Tomporature offertion compatent 2	study (Seckinger and Wolf) 669
Temperature, affecting corn stored 2	Macaroni brownness from varietal
years at 12°, 20°, and 25°C.	characteristics of (durum) (Mat-
(Christensen) 95	suo and Irvine) 78
Tempering of corn, low-moisture (pre-	Mechanical properties (SRW);
tempering) (Brekke) 521	modulus of elasticity (Shelef and
Thiamine: retention of, in baking of	Mohsenin) 392
Arabic bread (Maleki and Da-	Millfeeds (HRS, HRW); isoen-
ghir) 483	zymes of lipoxidase in (Guss,
Toxins: aflatoxin, in fungal fermenta-	
tion products; detection and esti-	Richardson, and Stahmann) 607
mation (Denault and Underkof-	Mixes of HRS, HRW, SRW, West-
	ern white; analyses of flours and
Turbulent agitation in steeping of bar-	millfeeds from
	(Farrell, Ward, Miller, and
ley and malt (Bloch and Mor-	Lovett) 39
gan) 61	(Waggle, Lambert, Miller, Far-
Ultracentrifuge studies of soybean	rell, and Deyoe) 48
	Protein(s) of
globulins (Nash and Wolf) 183	characterization of gamma-glia-
Varietal studies with wheat	dins (Meredith) 436
Australian; starch damage vs. ker-	immunochemical comparisons
	(Nimmo and O'Sullivan) 584
nel hardness (Williams) 383	interaction with dextrans (Jones
Durum; for macaroni brownness	
(Matsuo and Irvine) 78	
Vitamins	nitrogen-15 incorporation into
In bread (Arabic); effect of baking	(McConnell and Finlayson) 353
on retention (Maleki and Da-	Proteolytic enzymes of; effect on
ghir) 483	bread quality in U.K. (Hanford) 499
In flours and millfeeds from nine	Starch damage in, vs. hardness
wheat mixes (Waggle, Lambert,	(Williams) 383
Miller, Farrell, and Deyoe) 48	Sulfur in; rapid method for detn.
,,,,	(Basson) 92
Wheat	Steam-treated to improve semolina
Affected by storage fungi (durum) (Christensen) 100	quality (Irvine, Bradley, and
(Christensen) 100	Black) 230
Amino acid analysis (HRS, HRW);	Wheat by-products, see Millfeeds
methods (Kohler and Palter) 512	Wheat by products, see Winteens
Amylase development in (HRS,	X-Ray diffraction patterns of starches;
HRW, White club); with gib-	
berellie said (Plack and Man	sorption study with heat-moisture
berellic acid (Bloch and Mor-	treatment (Sair) 8
gan)	7-:
Bacterial flora of (Graves, Rogers,	Zein
Lyons, and Hesseltine) 288	Composition and properties vs.
Enzymes of (oxidation-reduction)	commercial processing (Boundy,
(HRS, HRW); quantitative study	Turner, Wall and Dimler) 281
(Honold, Farkas, and Stahmann) 373	In corn (dent, waxy, high-amylose)
Germination inhibition in, during	(Boundy, Woychik, Dimler, and
steeping with turbulent agitation	Wall) 160
1 3	,

CONTENTS

Number 1, January, 1967

P	AGE
A Method for the Detection and Estimation of Aflatoxin in Fungal Fermentation Products. Leo J. Denault and L. A. Underkofler	1
Heat-Moisture Treatment of Starch. L. Sair	8
The Fate of ADPG-Alpha-Glucan Glucosyltransferase during Amylolytic Corrosion of Starch Granules, and Its Relation to Starch Granule Structure. K. R. Chandorkar and N. P. Badenhuizen	27
Extensive Analyses of Flours and Millfeeds Made from Nine Different Wheat Mixes. I. Amounts and Analyses. E. P. Farrell, Arlin Ward, Gerald D. Miller, and Leslie A. Lovett	39
Extensive Analyses of Flours and Millfeeds Made from Nine Different Wheat Mixes. II. Amino Acids, Minerals, Vitamins, and Gross Energy. D. H. Waggle, M. A. Lambert, G. D. Miller, E. P. Farrell, and C. W. Deyoe	48
Germination Inhibition in Wheat and Barley during Steeping, and Alpha-Amylase Development in the Presence of Gibberellic Acid. Felix Bloch and Arthur I. Morgan, Jr.	61
Amino Acid Composition of Heat-Processed Soymilk and Its Correlation with Nutritive Value, L. R. Hackler and B. R. Stillings	70
Macaroni Brownness. R. R. Matsuo and G. N. Irvine	78
Comparative Composition of Waxy and Nonwaxy Rice. Amanda J. Vidal and Bienvenido O. Juliano	86
Determination of Total Sulfur in Wheat with EDTA and EGTA after Nitric-Per- chloric Acid Oxidation. W. D. Basson	92
Some Changes in No. 2 Corn Stored Two Years at Moisture Contents of 14.5 and 15.2% and Temperatures of 12°, 20°, and 25°C. C. M. Christensen	95
A Note on Invasion of Durum Wheat by Storage Fungi. C. M. Christensen	00
Editorial Policy and Suggestions to Authors	103
•	
Number 2, March, 1967	
Heterogeneous Reaction of Granular Starch with Hydrogen Chloride. I. Microscopic Observations. Tom R. Thomson and Dale Petite	05
Heterogeneous Reaction of Granular Starch with Hydrogen Chloride. II. Quantitative Studies. Tom R. Thomson and Sam D. Parks	18
Study of Phytase and Fluoride Effects in Germinating Corn Seeds. Chong W. Chang	29
Solubilization and Fractionation of Wheat Flour Proteins Insoluble in Dilute Acetic Acid. E. S. Inamine, Elaine G. Noble, and D. K. Mecham	43
Determination of Oil Contents of Dry-Milled Corn Fractions by Gas-Liquid Chromatography. L. T. Black, G. G. Spyres, and O. L. Brekke	52
Protein Composition of Dent, Waxy, and High-Amylose Corns. Joyce A. Boundy, J. H. Woychik, R. J. Dimler, and J. S. Wall	60

iv

The Incorporation of Cysteine.28S, Cystine.28S, and N-Ethylmaleimide.14C into Doughs Made from Wheat Flour. C. M. Mauritzen	170
Solubility and Ultracentrifugal Studies on Soybean Globulins. A. M. Nash and W. J. Wolf	183
The Use of Isolated Soybean Proteins in Bread. Sylvia Mizrahi, Gideon Zimmer- mann, Zeki Berk, and Uri Cogan	193
Effect of Heating on Brown Rice Composition and Quality. Tetsuya Iwasaki and Tatsuo Tani	
Study of Gluten Properties as Influenced by Certain Organic Solvents. J. G. Ponte, Jr., V. A. De Stefanis, S. T. Titcomb, and R. H. Cotton	211
Isolation and Chemical Comparison of Different Gamma-Gliadins from Hard Red Winter Wheat Flour. F. R. Huebner, J. A. Rothfus, and J. S. Wall	221
Erratum	229
Communication to the Editor: Improvement of Semolina Quality through Steam- Treatment of Durum Wheat. G. N. Irvine, J. W. Bradley, and H. C. Black	230
Editorial Policy and Suggestions to Authors	232
Number 3, May, 1967	
Effect of Oxygen Concentration on Deteriorative Mechanisms of Rice during Storage. Tetsuya Iwasaki and Tatsuo Tani	233
Recent Investigations on Wheat Flour Pentosans. H. Neukom, L. Providoli, H. Gremli, and P. A. Hui	238
New Starches. II. The Properties of the Starch Chunks from Amaranthus retro- flexus. K. J. Goering	245
Optimization of White Layer Cake Formulations by a Multiple-Factor Experimental Design. Leo T. Kissell	253
Reduction of the Microbial Populations in Flours Incorporated into Refrigerated Foods. Lazare Wiseblatt	269
Influence of Commercial Processing on Composition and Properties of Corn Zein. Joyce A. Boundy, J. E. Turner, J. S. Wall, and R. J. Dimler	281
Bacterial and Actinomycete Flora of Kansas-Nebraska and Pacific Northwest Wheat and Wheat Flour. R. R. Graves, Ruth F. Rogers, A. J. Lyons, Jr., and C. W. Hesseltine	288
Study of Gas Production and Retention in Doughs with a Modified Brabender Oven-Rise Recorder. Cecylia J. Marek and W. Bushuk	300
Changes in Flour Proteins during Dough Mixing. C. C. Tsen	308
Some Factors Affecting the Biological Availability of Phosphorus in Wheat By-Products. J. D. Summers, S. J. Slinger, and G. Cisneros	318
Protein Alteration in Flour Damaged by Ball-Milling and Roller-Milling. B. L. D'Appolonia and K. A. Gilles	324
The Role of Emulsifiers in the Incorporation of Air into Layer Cake Batter Systems. J. C. Wootton, N. B. Howard, J. B. Martin, D. E. McOsker, and J. Holme	333
A Note on the Determination of Salt in Self-Rising Flour. E. J. Malec and J. F. Conn	344
The State of Iron in Flour, Dough, and Bread. J. Leichter and M. A. Joslyn	346

Number 4, July, 1967

The Incorporation of Nitrogen-15 into the Constituents of the Wheat Kernel. W. B. McConnell and A. J. Finlayson	53
An Electronic Recording Dough Mixer. V. Measurement of Energy Used in a Mixograph-Type Mixer. Peter W. Voisey, H. Miller, and M. Kloek	59
The Oxidation-Reduction Enzymes of Wheat. II. A Quantitative Investigation of the Dehydrogenases. G. R. Honold, G. L. Farkas, and M. A. Stahmann 3	73
Relation of Starch Damage and Related Characteristics to Kernel Hardness in Australian Wheat Varieties. Philip C. Williams	83
Evaluation of the Modulus of Elasticity of Wheat Grain. Leora Shelef and Nuri N. Mohsenin	92
Proteolytic Activity Based on a Malt Flour Substrate Interaction. Paul R. Witt, 1r., and Edward A. Tousignant	103
Isolation and Chromatographic Fractionation of Hemicelluloses from Wheat Flour. Earl W. Cole	111
Erratum	116
Editorial Policy	116

Number 5, September, 1967

Nutritive Values of Some Oilseed Proteins. Robert John Evans and Selma L. Bandemer	17
Studies of Gluten Lipids. I. Distribution of Lipids in Gluten Fractions Separated by Solubility in 70% Ethanol. J. G. Ponte, Jr., V. A. De Stefanis, and R. H. Cotton	
On the Solubility of Gliadinlike Proteins. IV. Characterization of Some Gamma-Gliadins. Peter Meredith	
Interaction between Wheat Proteins and Dextrans. R. W. Jones and Stig R. Erlander	47
Distribution of Phosphorus Compounds in the Protein Fractions of Various Types of Wheat Flours. A. Bourdet and P. Feillet	57
Effect of Baking on Retention of Thiamine, Riboflavin, and Niacin in Arabic Bread. Morteza Maleki and Shawky Daghir	
Comparison of the Wet-Milling Properties of Opaque-2 High-Lysine Corn and Normal Corn. S. A. Watson and K. R. Yahl	88
The Proteolytic Enzymes of Wheat and Flour and Their Effect on Bread Quality in the United Kingdom. J. Hanford	99
Studies on Methods for Amino Acid Analysis of Wheat Products. G. O. Kohler and Rhoda Palter	
Corn Dry-Milling: Pretempering Low-Moisture Corn. O. L. Brekke	
New Starches, III. The Properties of the Starch from Phalaris canariensis. K. J. Goering and Merlyn Schuh	32
Studies of the Carbonyl Compounds Produced by Sugar-Amino Acid Reactions. I. Model Systems. Lloyd W. Rooney, Ali Salem, and John A. Johnson	39
The Codextrinization of Amylopectin with Radioactive Glucose and Partially Methylated Glucose. M. H. Fischer and F. Smith	

Note on the Reaction of Corn Starch with Chloromethylphosphonic Dichloride in Pyridine. Feiga R. T. Rosenthal, A. M. N. Corrêa, and E. Tolmasquim	554
A Note on the Effect of Potassium Iodate and Thioacetic Acid on the Birefringence of Stretched Gluten. P. J. Frazier and H. G. Muller	558
Editorial Policy and Suggestions to Authors	560
Number 6, November, 1967	

Editorial. K. A. Gilles	561
Some Rheological Properties of Crude Gluten Mixed in the Farinograph. M. Doguchi and I. Hlynka	561
Studies of the Carbonyl Compounds Produced by Sugar-Amino Acid Reactions. II. In Bread Systems. Ali Salem, Lloyd W. Rooney, and John A. Johnson	576
Immunochemical Comparisons of Antigenic Proteins of Durum and Hard Red Spring Wheats. C. C. Nimmo and Mary T. O'Sullivan	584
Conditions of Drying Parboiled Paddy for Optimum Milling Quality. Kshirod R. Bhattacharya and Y. M. Indudhara Swamy	592
A Method for Detecting Mixtures of Artificially Dried Corn with High-Moisture Corn. Joe R. Hart	601
The Oxidation-Reduction Enzymes of Wheat III. Isoenzymes of Lipoxidase in Wheat Fractions and Soybean. P. L. Guss, T. Richardson, and M. A. Stahmann	607
Characterization of the Acetic Acid-Insoluble Fraction of Wheat Gluten Protein. J. E. Cluskey and R. J. Dimler	611
Studies with Radioactive Tracers. XI. The Use of N-Ethylmaleimide-1-4°C in the Determination of Flour Sulfhydryls and Correlations between Masked Sulfhydryls and Loaf Volumes. C. C. Lee and Tzen-son Lai Purification and Structural Studies of the 11S Component of Soybean Proteins. N. Catsimpoolas, D. A. Rogers, S. J. Circle, and E. W. Meyer	
Correlation of Amino Acid Indexes with Nutritional Quality of Several Soybean Fractions. L. R. Hackler, B. R. Stillings, and R. J. Polimeni, Jr	
Purification of the 11S Component of Soybean Protein. A. C. Eldridge and W. J. Wolf	645
Cryoprecipitation of Soybean 11S Protein. W. J. Wolf and Dayle Ann Sly	653
Lipid Distribution in the Protein Matrix of Wheat Endosperm as Observed by Electron Microscopy. H. L. Seckinger and M. J. Wolf	669
The Effect of Acid and Salt on the Farinogram and Extensigram of Dough. K. Tanaka, Kazuyo Furukawa, and H. Matsumoto	
Erratum	680
Editorial Policy	680
Author and Subject Indexes for Volume 44	681

